

ABSTRACT

It has been discovered that a robust and therapeutic anti-cancer response can be generated by immunizing with a xenogeneic form of the enzyme telomerase reverse transcriptase (TERT). Cancer subjects are multiply immunized with TERT from another species — either in protein form, or  
5 with a TERT expression vector. Presence of the xenogeneic components apparently overcomes natural immunotolerance to self-antigen. The response can be focused by simultaneous or subsequent immunization with isogenic TERT. As a result, the immune system generates T lymphocytes that are cytotoxic for virtually any cancer cell, by virtue of TERT expressed due to malignant transformation. The anti-tumor response causes a substantial inhibition of tumor cell  
10 growth, demonstrating the therapeutic benefit of this invention.